College of Engineering, Pune

(An Autonomous Institute of Govt. of Maharashtra, Permanently Affiliated to S.P. Pune University)

Department of Electronics and Telecommunication

(Wired and Wireless Communication – 2009)

Curriculum Structure & Detailed Syllabus (PG Program)

M. Tech. – Electronics & Telecommunication

(Effective from: A.Y. 2019-20)

PG Program [M. Tech. Electronics and Telecommunication –Wired and Wireless Communication] Curriculum Structure

W.e.f AY 2019-20 and Applicable for batches admitted from AY 2019-20 to 2022-23

List of Abbreviations

Abbreviation	Title	No of courses	Credits	% of Credits
PSMC	Program Specific Mathematics Course	1	4	5.88%
PSBC	Program Specific Bridge Course	1	3	4.41%
DEC	Department Elective Course	3	9	13.24%
MLC	Mandatory Learning Course	2	0	0%
PCC	Program Core Course	5	15	22.06%
LC	Laboratory Course	7	9	13.24%
IOC	Interdisciplinary Open Course	1	3	4.41%
LLC	Liberal Learning Course	1	1	1.47%
SLC	Self Learning Course	2	6	8.82%
SBC	Skill Based Course	2	18	26.47%
Total		**25**	**68**	**100%**

PG Program [M. Tech. Electronics and Telecommunication –Wired and Wireless Communication] Curriculum Structure

Semester I

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	PSMC	ETC-19005	Linear Algebra and Probability Theory	3	1	--	4
2.	PSBC	EWW-19001	Voice and Data Networks	3	0	--	3
3.	DEC	EWW(DE)-19001 ETC(DE)-19009 EWW(DE)-19002	Department Elective –I (a) Cognitive Radio (b) Digital Signal and Image Processing (c) RF and Microwave Circuit Design	3	--	--	3
4.	MLC	ML-19011	Research Methodology and Intellectual Property Rights	2	--	--	--
5.	MLC	ML-19012	Effective Technical Communication Skills	1	--	--	--
6.	PCC	EWW-19002	Advances in Digital Communication	3	--	--	3
7.	PCC	EWW-19003	Wireless and Mobile Communication	3	--	--	3
8.	LC	EWW-19004	Simulation Lab	--	1	2	2
9.	LC	EWW-19005	Advances in Digital Communication Lab	--	1	2	2
10.	LC	EWW-19006	Wireless and Mobile Communication Lab	--	--	2	1
11.	LC	EWW-19007	Seminar	--	--	2	1
			Total Credits				**22**

Interdisciplinary Open Course (IOC): Every department shall offer one IOC course (in Engineering/Science/Technology). A student can opt for an IOC course offered by a department except the one offered by his /her department.

Semester II

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	IOC	ETC-19006	Interdisciplinary Open Course (To be offered to other departments) – Broadband Communication	3	--	--	3
2.	DEC	ETC(DE)-19006 EWW(DE)-19003 EWW(DE)-19004	Department Elective –II (a) Internet of Things (b) MIMO System (c) Optical Networks	3	--	--	3
3.	DEC	EWW(DE)-19005 ETC(DE)-19010 EWW(DE)-19006	Department Elective –III (a) Wireless Sensor Network (b) Joint Time Frequency Analysis (c) Radar and Satellite Communication	3	--	--	3
4.	LLC		Liberal Learning Course	--	--	--	1
5.	PCC	EWW-19009	Broadband Networks	3	--	--	3
6.	PCC	EWW-19008	Advanced Antenna Theory	3	--	--	3
7.	PCC	EWW-19010	Software Defined Networks	3	--	--	3
8.	LC	EWW-19011	Broadband Networks Lab	--	--	2	1
9.	LC	EWW-19012	Advanced Antenna Theory Lab	--	--	2	1
10.	LC	EWW-19013	Software Defined Networks Lab	--	--	2	1
			Total Credits				**22**

PG Program [M. Tech. Electronics and Telecommunication –Wired and Wireless Communication] Curriculum Structure

Semester-III

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	SBC	EWW-20001	Dissertation Phase – I	--	--	18	9
2.	SLC	EWW-20002	Massive Open Online Course -I	3	--	--	3
			Total Credits				**12**

Semester-IV

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	SBC	EWW-20003	Dissertation Phase – II	--	--	18	9
2.	SLC	EWW-20004	Massive Open Online Course -II	3	--	--	3
			Total Credits				**12**

MOOC Courses Identified:

- Advanced IoT Applications
- Evolution of Air Interface towards 5G
- Machine Learning
- Scientific Computing
- Modelling, Simulation and Optimization Techniques